

ASTM International  
*Standard Practice for Radon Mitigation Systems in Existing Low-Rise Residential Buildings*  
(ASTMI E 2121-01, January 10, 2001)

~ EPA DISCUSSION PAPER ~  
20 June 2002

*EPA proposes to incorporate by reference, ASTM E 2121-01, into its voluntary National radon program. This discussion provides the broad context for EPA's proposal, and is intended to more fully inform reviewers in preparing their comments. EPA is soliciting comments on its proposal to incorporate the ASTM standard by reference; we are not soliciting comments on the E 2121 consensus standard itself. This proposed action by EPA is consistent with, and encouraged by, the National Technology Transfer and Advancement Act (NTTAA) of 1995, and by the Office of Management and Budget (OMB) Circular A-119 on Federal participation in the development and use of voluntary consensus standards. This document and other materials related to this proposal can be found on EPA's web site at [www.epa.gov/iaq/](http://www.epa.gov/iaq/).*

The Environmental Protection Agency's (EPA) current National radon policy is based upon two types of documents. The first group is a corpus of scientific and technical (base) documents, e.g., the *Technical Support Document for the Citizen's Guide to Radon*, or the *Radon Mitigation Standards*. This group includes guidance, protocols, and voluntary standards (of practice), among others. The second group is consumer oriented documents. This group includes the *Consumer's Guide to Radon Reduction*, the *Citizen's Guide to Radon*, and the *Home Buyer's and Seller's Guide to Radon*, the three most important consumer publications. The creation of all these documents required extensive research and analysis, stakeholder involvement, rigorous scientific review, several years and significant human and capital resources to compile. Together, these documents are the basis for all EPA guidance to the American public on radon.

As author of the (above) documents, EPA is responsible for their maintenance, revision, printing or retirement. Since base documents and consumer documents are closely related, a new base document must be reviewed for its potential to affect related documents, and ultimately, the Agency's radon policy. A review decision may also be triggered by the development of a private sector document. Therefore, EPA may conduct a document or policy review whenever circumstances warrant.

On January 10, 2001, ASTM International (ASTMI) issued its *Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings*, E 2121-01. This voluntary consensus standard culminates more than a decade of effort on the part of many, including EPA. As a consequence of E 2121, EPA decided that an internal review of its *Radon Mitigation Standards* (EPA 402-R-93-078, Revised April 1994) was warranted. EPA has concluded that relative to the *Radon Mitigation Standards*, the E 2121 standard: (1) will achieve the same or a higher level of risk reduction; (2) is equal or better in terms of its technical competence; and, (3) is the best available consensus-based standard applicable to low-rise residential buildings.

Therefore, EPA proposes to incorporate E 2121 by reference. This means that EPA will defer to E 2121 as the preferred mitigation standard, and will place its *Radon Mitigation Standards* on the list of inactive documents. EPA will also incorporate E 2121 in several other ways.

ASTM International  
*Standard Practice for Radon Mitigation Systems in Existing Low-Rise Residential Buildings*  
(ASTMI E 2121-01, January 10, 2001)

First, EPA will adopt a policy on E 2121 (Draft, 20 June 2002).

Second, consumers will be educated to ask mitigators to install systems to the E 2121 standard.

Third, the preference for E 2121 will be reflected in revisions to existing or in any new consumer oriented publications, and on EPA's radon web site, as appropriate.

Fourth, EPA will encourage the radon industry, training providers and others, to adopt E 2121.

Fifth, as appropriate, EPA will encourage the states to prefer or adopt E 2121.

Sixth, EPA will revise selected other documents to reflect this change, e.g., by including E 2121 in EPA's State Indoor Radon Grant (SIRG) guidance to the states.

Seventh, EPA will broadly communicate this policy decision to interested Federal and other parties, e.g., the Interagency Committee on Standards Policy (ICSP), and the U.S. Army Corps of Engineers.

Eighth, EPA will submit this decision for inclusion in the ICSP's *Annual Report on Federal Agency Use of Voluntary Consensus Standards*.

Although this is the first instance of the EPA radon program incorporating a private sector standard by reference, there is a substantial precedent for incorporating E 2121 by reference. There are hundreds of examples of EPA (and other Federal agencies) incorporating the standards of private standards setting organizations like ASTM and ASHRAE by reference. These actions are consistent with the National Technology Transfer and Advancement Act (NTTAA) of 1995, and its predecessors, the Federal Technology Transfer Act of 1986 and the Stevenson-Wydler Technology Innovation Act of 1980. The NTTAA encourages agencies to use voluntary consensus standards in lieu of government-unique standards developed by an Agency. It is also consistent with the Office of Management and Budget (OMB) Circular A-119, which directs Federal participation in the development and use of standards developed or adopted by voluntary consensus standards bodies.

As a radon stakeholder, EPA is interested in your perspective on and opinion of our proposal to incorporate by reference, E 2121. EPA is interested in your opinion because the principle of good government requires it, and broad stakeholder involvement is important and necessary. Among other things, EPA hopes to identify any potential unintended consequences of this action, and address them prior to making this policy change. EPA is particularly interested in how this change might affect the states, since several specifically cite EPA documents and publications in their radon related legislation, regulations or policies. The state operated radon offices and programs, and the radon services industry, are critical to the continuing success of the Nation's radon risk reduction efforts.

This *Discussion Paper* is one of three written items; please consider them all in preparing your written comments; the other two are the draft Policy (20 June 2002), and a covering letter. Separate cover letters were prepared for: (1) EPA's Regional offices; (2) the Conference of Radiation Control Program Directors (CRCPD); and, (3) radon industry organizations, i.e., the American Association of Radon Scientists and Technologists (AARST), the National Environmental Health Association (NEHA) National Radon Proficiency Program (NRPP), the National Radon Safety Board (NRSB); and, (4) the four Regional Radon Training Centers (RRTC). Please provide your written comments to Phil Jalbert (202.564.9431, [jalbert.philip@epa.gov](mailto:jalbert.philip@epa.gov)) or Gene Fisher (202.564.9418, [fisher.eugene@epa.gov](mailto:fisher.eugene@epa.gov)).